1. A method for detecting a cancer in a tissue sample, the method comprising the steps of:

(a) providing the tissue sample; and

(b) analyzing the tissue sample for the presence of a SIM2 marker, wherein presence of the SIM2 marker in the tissue sample indicates that the tissue sample contains a cancer.

2. The method of claim 1, wherein the tissue sample is selected from the group consisting of a colon tissue sample, a prostate tissue sample, and a pancreas tissue sample.

3. The method of claim 1, wherein the tissue sample is a prostate tissue sample.

4. The method of claim 1, wherein the tissue sample is a pancreas tissue sample.

5. The method of claim 1, wherein the tissue sample is a colon tissue sample.

6. The method of claim 1, wherein the SIM2 marker is a SIM2 nucleic acid.

7. The method of claim 6, wherein the SIM2 nucleic acid is a SIM2 mRNA.

Same as it?

8. The method of claim 6, wherein the SIM2 nucleic acid is a native SIM2 nucleic acid.

9. The method of claim 8, wherein the native SIM2 nucleic acid has a nucleotide sequence selected from the group consisting of SEQ ID NO:1 and SEQ ID NO:2.

10. The method of claim 6, wherein the step (a) of providing a tissue sample comprises obtaining the tissue sample from a human subject; and the step (b) of analyzing the tissue sample comprises isolating RNA from the tissue sample, generating cDNAs from the isolated RNA, amplifying the cDNAs by PCR to generate a PCR product, and electrophoretically separating the PCR product to yield an electrophoretic pattern.

11. The method of claim 10, wherein the step of amplifying the cDNAs by PCR is performed using an oligonucleotide primer comprising a nucleotide sequence selected from the group consisting of SEQ ID NOs:7, 8, 15, and 16.

12. The method of claim 10, wherein the step of amplifying the cDNAs by PCR is performed using a first oligonucleotide primer and a second oligonucleotide primer, the first oligonucleotide primer comprising a nucleotide sequence selected from the group consisting of SEQ ID NOs:7 and 15, and the second oligonucleotide primer comprising a nucleotide sequence selected from the group consisting of SEQ ID NOs:8 and 16.

13. The method of claim 12, wherein the presence of a 472 base pair nucleic acid in the electrophoretic pattern indicates that the tissue sample contains a cancer.

14. The method of claim 6, wherein the step (b) of analyzing the tissue sample for the SIM2 nucleic acid comprises contacting the tissue sample with an oligonucleotide probe that hybridizes under stringent hybridization conditions to a polynucleotide having a nucleic acid sequence selected from the group consisting of SEQ ID NO:1, SEQ ID NO:2, the complement of SEQ ID NO:1, and the complement of SEQ ID NO:2.

15. The method of claim 14, wherein the oligonucleotide probe comprises the nucleic acid of SEQ ID NO:9.

16. The method of claim 14, wherein the oligonucleotide probe further comprises a detectable label.

17. The method of claim 1, wherein the SIM2 marker is a SIM2 protein.

18. The method of claim 17, wherein the SIM2 protein is a native SIM2 protein.

19. The method of claim 18, wherein the native SIM2 protein has an amino acid sequence selected from the group consisting of SEQ ID NO:3 and SEQ ID NO:4.

20. The method of claim 17, wherein the step (a) of providing a tissue sample comprises obtaining the tissue sample from a human subject; and the step (b) of analyzing the tissue sample comprises contacting at least a portion of the tissue sample with a probe that specifically binds to the SIM2 protein.

21. The method of claim 20, wherein the probe comprises a detectable label.

22. The method of claim 20, wherein the probe comprises an antibody.

23. The method of claim 23, wherein the antibody specifically binds to the peptide of SEQ ID NO:14.

24. The method of claim 1, wherein the tissue sample comprises a cell isolated from a source selected from the group consisting of feces, urine, and peripheral blood.

25. A method of modulating SIM2 gene expression comprising the steps of:

(a) providing a cell that expresses a SIM2 gene; and

(b) introducing into the cell an agent that modulates the expression the SIM2 gene in the cell.

26. The method of claim 25, wherein the agent is an oligonucleotide.

27. The method of claim 26, wherein the agent is an antisense oligonucleotide.

28. The method of claim 27, wherein the antisense oligonucleotide hybridizes under stringent hybridization conditions to a polynucleotide that encodes a SIM2 protein.

29. The method of claim 28, wherein the antisense oligonucleotide is at least 18 nucleotides in length and comprises a sequence that is a complement of a nucleic acid that encodes the SIM2 protein.

30. The method of claim 27, wherein the antisense oligonucleotide comprises a nucleic acid sequence selected from the group consisting of SEQ ID NOs: 11 and 12.

31. A method of identifying a test compound that modulates expression of a SIM2 gene in a cell, the method comprising the steps of:

(a) providing a cell expressing a SIM2 gene;

(b) contacting the cell with the test compound; and

(c) detecting a modulation in the expression of the SIM2 gene, wherein detecting the modulation indicates that the test compound modulates expression of the SIM2 gene.

32. The method of claim 31, wherein the cell is derived from a tissue sample selected from the group consisting of a colon tissue sample, a prostate tissue sample, and a pancreas tissue sample.

33. The method of claim 31, wherein the step of detecting the modulation in the expression of the SIM2 gene comprises analyzing the cell for a change in theintracellular concentration of a SIM2 marker.

34. The method of claim 33, wherein the SIM2 marker is a SIM2 nucleic acid.

35. The method of claim 34, wherein the SIM2 nucleic acid is a SIM2 mRNA.

36. The method of claim 33, wherein the SIM2 nucleic acid is a native SIM2 nucleic acid.

37. The method of claim 36, wherein the native SIM2 nucleic acid has a nucleotide sequence selected from the group consisting of SEQ ID NO:1 and SEQ ID NO:2.

38. The method of claim 33, wherein the SIM2 marker is a SIM2 protein.

39. The method of claim 38, wherein the SIM2 protein is a native SIM2 protein.

40. The method of claim 39, wherein the native SIM2 protein has an amino acid sequence selected from the group consisting of SEQ ID NO:3 and SEQ ID NO:4.

41. A method for reducing the growth rate of a cancer comprising a cell expressing a SIM2 protein, the method comprising the step of:

contacting the cell with an agent that inhibits the expression of the SIM2 protein in the cell.

42. The method of claim 41, wherein the agent is an oligonucleotide.

43. The method of claim 42, wherein the agent is an antisense oligonucleotide.

44. The method of claim 43, wherein the antisense oligonucleotide hybridizes under stringent hybridization conditions to a polynucleotide that encodes the SIM2 protein.

45. The method of claim 44, wherein the antisense oligonucleotide is at least 18 nucleotides in length and comprises a sequence that is a complement of a nucleic acid that encodes the SIM2 protein.

46. The method of claim 42, wherein the antisense oligonucleotide comprises a nucleic acid sequence selected from the group consisting of SEQ ID NOs: 11 and 12.

47. The method of claim 46, wherein the nucleic acid sequence is SEQ ID NO:12.

48. The method of claim 41, wherein the cancer is selected from the group consisting of a colon cancer, a prostate cancer, and a pancreas cancer.

49. The method of claim 41, wherein the cancer is a colon cancer.

50. The method of claim 41 wherein the cancer is in an animal.

51. The method of claim 50, wherein the animal is a mammal.

52. A kit for modulating expression of a SIM2 gene in a cell, the kit comprising: an agent that modulates the expression of the SIM2 gene in the cell and instructions for using the agent to modulate the expression of the SIM2 gene in the cell.

53. The kit of claim 52, wherein the agent is an oligonucleotide.

54. The kit of claim 53, wherein the agent is an antisense oligonucleotide.

55. The kit of claim 54, wherein the antisense oligonucleotide hybridizes under stringent hybridization conditions to a polynucleotide that encodes a SIM2 protein.

56. The kit of claim 55, wherein the antisense oligonucleotide is at least 18 nucleotides in length and comprises a sequence that is a complement of a nucleic acid that encodes the SIM2 protein.

57. The kit of claim 54, wherein the antisense oligonucleotide comprises a nucleic acid sequence selected from the group consisting of SEQ ID NOs: 11 and 12.

58. The kit of claim 57, wherein the nucleic acid sequence is SEQ ID NO:12.